



# SMARTPHONE USAGE AMONG STUDENTS

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## ABSTRACT

This paper focuses on trends in usage of Smartphone among students. A sample of 150 students is drawn from different levels of study residing in the twin cities of Hyderabad and Secunderabad, Telangana. The main objectives of this study are to explore the trends of Smartphone and usage among students; to determine the preferred smartphone operating system among students; to determine the brand preference; and how frequently students use smartphone. Results indicate that Majority of the students preferred Samsung and Apple followed by Blackberry, HTC and others. Most of the students have shown interest to spend amount between 5,000 and 15,000. Study revealed that, in the college, taking pictures, making a phone call, sending text message and studying are among the top purposes of usage. At home, participants use to download software, listening to music and taking video. Taking pictures has the least score. At other places, participants use smartphone for watching videos, listening to music, taking video and checking e-mails. Making phone calls has the least score. Majority of the students opined that smartphone is useful for education. More than 50 percent of the students use smartphone always. Many of the students owned smartphone with an android and windows operating system.

**KEYWORDS:** Smartphones, Usage, Students, Education.

## INTRODUCTION

Smartphone is defined as a cellular telephone with built-in applications and Internet access. In addition to digital voice service, smartphones provide text messaging, e-mail, Web browsing, still and video cameras, MP3 player and video playback and calling. The development of smart phones began in the early 1990's and exploded in 2007 dominated by different operating systems with interactive features by various vendors. Smart phones have become essential for people and this has increased the demand for smart phones in the market. Due to the benefits in the smartphones, there has been an increase in demand (Park and Chen, 2007). Smart phone has become an integral part of everyday student's life. It is noted that university students are among the highest contributors to the increasing sales of smart phones (Jacob and Isaac, 2008). It is no surprise that Post (2011) found that 99.8% of college students have cell phones. College students feel either cellphones or smartphones are an essential to survive. Today, many students primarily use smartphone for texting and running apps, phones are rarely used to make phone calls. As the usage of smart phones has increased due to its functionality which helps in daily life and as young consumers have the highest Smartphone penetration in the market place, this paper aims to investigate smart phone usage among students.

## LITERATURE REVIEW

Studies revealed that nearly every students at a college level own smartphones [(N. Park and H. Lee, (2012), J.L. Kim and J. Altmann, (2013), K.B. Payne, H. Wharrad and K. Watts, K. (2012), W. Uys, A. Mia, G.J.Jansen, H.V. Schyff, M.A. Josias, M. Khusu, M. Gierdien, N.A. Luekes, S. Faltein, T. Gihwala, T. Theunissen, Y. Samsodie, (2012), N.M. M. Mohtar, M. A. Hassan, M. S. Hassan and M. N. Osman, (2013)].

Smartphones have emerged as most rapidly growing market segment in the Telecommunication industry ((Cecere, Corrocher, & Battaglia, 2015). The recent developments of advanced operating systems, numerous application, and competition in telecommunication market has led to growth in the smartphone users. (N. Park, Kim, Shon, & Shim, 2013).

Maguth (2013) contends that smartphones hold many capabilities as computers. Dean (2010) stressed that text messaging and e-mailing are two of the most commonly used functions on smartphones among college students followed by reading news, watching videos and readings books. Peterson and Low (2011) stated that student look at web sites, check their e-mail and use social networking sites such as Facebook and Twitter most often.

Smartphone usage includes checking emails, making calls, sending text messages, taking pictures, downloading software, listening to music, taking video, watching movies, and browsing internet (Alfawareh and Jusoh, 2014).

## RESEARCH METHODOLOGY

The objectives of the research are to find out trends in usage of Smartphones; their preferences toward brand; affordability of students; purpose of usage, how often it is used for learning process; preferred operating system.

The data was collected by a questionnaire conducted among 150 students in the

twin cities of Hyderabad and Secunderabad. The questionnaire was distributed to students who were using smart phone. The questionnaire consisted of two parts. Part one involved questions relating to demographic profile such as gender, age group, and level of study. Part two involved questions relating to smart phone like preferable brand, purpose of usage of smart phone, how often they use smart phone, preferable operating system, and affordability of students on Smartphone.

## Research Questions

RQ1: What is the preferable brand of smartphone?

RQ2: What is the affordability of students to purchase smart phone?

RQ3: What is the purpose of usage of smartphone?

RQ4: Is smart phone useful for education?

RQ5: How often do college students use smartphone?

RQ6: What is the preferred Operating System for Smartphone?

## DATA ANALYSIS AND RESULTS

Data analysis and results are presented in two parts: Part one contains the demographic profile of the students considered for study. Part two contains the trends, usage, preferred brand and operating system and the frequency of usage of smartphone among students.

### PART-I: Demographic profile of the students

Among the respondent under study, 60 percent were male and 40 percent were female. Majority of the respondents are in the age group of 19-21 (38%) and 22-25 (38.7%). Almost 56% of the respondents were studying Post Graduate and 22% Graduate (see Appendix, Table-1).

### PART –II: Trends and Usage of Smart Phones among Students

#### RQ1: What is the preferred brand of Smartphone?

Respondents were asked "which brand do they prefer?". 42 respondents (28%) answered Samsung, 41 (27.3%) respondents answered Apple, followed by 26 (17.3) respondents blackberry, 19 (12.7) HTC and 22 (14.7) others. See Appendix, Table-2. Samsung retained its number one position in the worldwide smartphone market with a share of 21% in 2016Q3 (IDC, Nov 2016).

#### RQ2: What is the affordability of students to purchase Smartphone?

Price is one of the factors influencing the purchase decision of Smartphone. The question "How much you are willing to pay for Smartphone?" is asked to know the willingness and also the affordability of the respondents to buy. According to table-3, 51 respondents (i.e.34 percent) are willing to pay 10001-15000, 45 people (30 percent) are willing to pay 5000-10000 followed by 28 people (18.7) are willing to pay 15001-20000 and 26 people (17.3) are willing to pay above 20000. This indicates that maximum respondents would like to purchase a smartphone ranging from 5,000 to 15,000. Hence it can be inferred that the sales for Smartphone ranging mid will have more demand in the market. See Appendix, Table-3.

**RQ3: What is the purpose of usage of Smartphone?**

Respondents were asked "Why do you use Smartphone?". A comparison analysis of usage of Smartphone at different places like school/college, home and other places was done. Multiple options were given and students were given a choice to tick more than one option also. Options included making a phone call, sending text message, checking email, taking pictures, entertainment, studying, instant messaging, browsing internet, downloading software, listening to music, taking video, and watching movies. Table-4 revealed that in the college, taking pictures (58%), making a phone call (55.3%), sending text message (55.3%) and studying (52.7%) are among the top purposes of usage. Downloading software has the least score (38.7%). The number of college students using their cell phones during class has increased over the last few years. 80% of students admit to texting at least once in class (Jesse, 2013). Epstein (2013) found that texting helped the participants to complete homework, enhance therapeutic alliance, improve self-efficacy, and increase their overall positive feelings about themselves. Additionally, Elder's (2013) study explored college students self-reported cellphone usage and beliefs and investigated the effect on student learning. Tulane (2010) publication states that texting can be used for many purposes of communicating and that many text messages sent are to maintain interpersonal relationships. Beaver (2010) also found that cellphones impact relationships.

At home, participants use to download software (51.3%), listening to music (44.7%) and taking video (44.7%). Taking pictures has the least score (30.7%). At other places, participants use smartphone for watching videos (21.3%), listening to music (14.7%), taking video (14.0%) and checking e-mails (14.0%). Making phone calls has the least score (8.0%). See Appendix, Table-4 and Fig-1.

**RQ4: Is smart phone useful for education?**

68% of the students under study opined that smartphone is useful for education. See Appendix, Table-5

**RQ5: How often do college students use smartphone?**

An attempt is made to study to what extent students use their smart phones. Table-6 shows that, 55.3 % of students always use, 40% sometimes use and 7 % never use to login to academic work. For downloading class materials, 46% students use always, 46.7% use sometimes and 7.4% never use. 42% of students always use, 42.7% sometimes use, and 15.3 never use to take pic of class lecture or notes. See Appendix, Table-6 and Fig-2. Baker (2012) found that 45% of students are spending more than four hours a day on cellphone. eCycle (2012) stated that students can also use their cell phone camera to take pictures of the black/white board or to record their professors' lecture during class to review later.

**RQ6: What is the preferred Operating System for Smartphone?**

Smartphones are distinguished from standard mobile phones in terms of their operating system and their purpose of use ((Liu & Liang, 2014; Wang, Wang, Gas-kin, & Wang, 2015). The popular mobile operating systems (OS) installed in the smart phones include Apple's iOS, Google's Android, Nokia's Symbian and RIM's BlackBerry OS. The study indicated that 44.7 percent of students own a smartphone with an android operating system and 40.7 percent of students use Windows followed by 9.3 percent symbian and 5.3 percent iOS. Hence students prefer the Android Operating System. See Appendix, Table-7. Android dominated the smartphone market with a share of 86.8% in the year 2016Q3 (IDC, Nov2016). Gayle R. Jesse (2015) found that the college students preferred Android Operating System. With regard to the type of operating system used within the smart phone, 36 per cent of students use Android while only 8 per cent go for iOS and 2 per cent take up Windows Phone. Meanwhile, RIM BlackBerry OS is used by 14.5 per cent students (Norazah Mohd Suki, 2013).

**CONCLUSION**

This paper revealed the trends in smartphone usage among students in the twin cities of Hyderabad and Secunderabad. Study has shown that students use smartphone in the college for taking pictures, making a phone call, sending text message and studying. At home, participants use to download software, listening to music and taking video. Taking pictures has the least score. At other places, participants use smartphone for watching videos, listening to music, taking video and checking e-mails. Making phone calls has the least score. High percentage of students uses smartphone for academic purpose to take pic of class notes or download the class notes. Most of the students can afford to own smartphone priced between 5,000 and 15,000. Majority of the students preferred Samsung and Apple followed by Blackberry, HTC and others. Many of the students owned smartphone with an android and windows operating system.

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## APPENDICES

Table-1: Demographic Profile of the Respondents

Variable	N	%
<b>Gender:</b>		
Male	90	60
Female	60	40
<b>Age Group:</b>		
15-18 yrs	22	14.7
19-21 yrs	57	38.0
22-25 yrs	58	38.7
26-30 yrs	13	8.7
<b>Level of Study:</b>		
X class	20	13.3
Inter	13	8.7
UG	33	22.0
PG	84	56.0

Table-2 RQ1: Preferable Brand

Preference of Brand	n	%
Apple	41	27.3
Blackberry	26	17.3
Samsung	42	28.0
HTC	19	12.7
Others	22	14.7
Total	150	100.0

Table-3 RQ2: Amount students prefer to spend

Amount	n	%
5000-10000	45	30.0
10001-15000	51	34.0
15001-20000	28	18.7
20000 Above	26	17.3
Total	150	100.0

Table-4 RQ3: Purpose of Usage of Smartphone

Purpose of Usage	College		Home		Other places	
	n	%	n	%	n	%
Make a phone call	83	55.3	55	36.7	12	8.0
Send text message	83	55.3	54	36.0	13	8.7
Check email	73	48.7	56	37.3	21	14.0
Taking pictures	87	58.0	46	30.7	17	11.3
Entertainment	72	48.0	65	43.3	13	8.7
Studying	79	52.7	51	34.0	20	13.3
Instant messaging	74	49.3	59	39.3	17	11.3
Browsing internet	75	50.0	56	37.3	19	12.7
Download software	58	38.7	77	51.3	15	10.0
Listen to music	61	40.7	67	44.7	22	14.7
Taking video	62	41.3	67	44.7	21	14.0
Watching movies	61	40.7	57	38.0	32	21.3

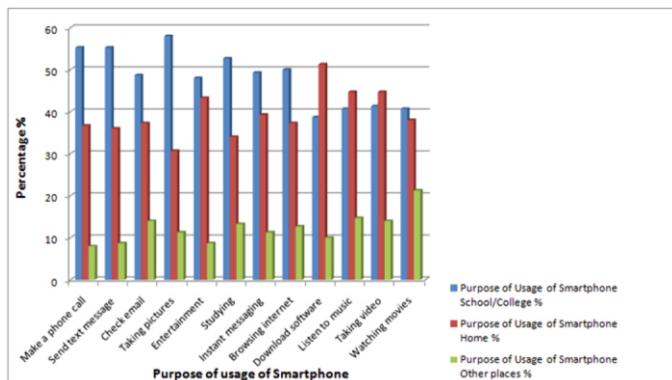


Fig.1: RQ3: Purpose of Usage of Smartphone at School/College, Home and Other Places

Table-5 RQ4: Is smart phone useful for education?

Response	n	%
Yes	102	68.0
No	48	32.0

Table-6 RQ5: Usage of Smartphone

Statement	Always	Sometimes	Never
How often do you use a smartphone to login to your academic work	83 (55.3)	60 (40.0)	7 (4.7)
How often do you use a smartphone for downloading class materials	69 (46.0)	70 (46.7)	11 (7.4)
How often do you use to take pic of class lecture or notes	63 (42.0)	64 (42.7)	23 (15.3)

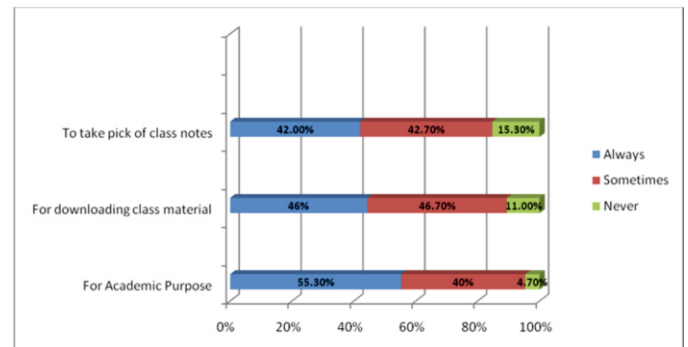


Fig-2 RQ5: Usage of Smartphone

Table-7 RQ6: Preferred Operating System

Operating system	N	%
Android	67	44.7
Windows	61	40.7
Symbian	14	9.3
ios	8	5.3